

**WEST**[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 5 of 5 returned.**☐ 1. Document ID: US 4529481 A

L1: Entry 1 of 5

File: USPT

Jul 16, 1985

US-PAT-NO: 4529481

DOCUMENT-IDENTIFIER: US 4529481 A

TITLE: Synthetic polyester pulp and process for preparing same

DATE-ISSUED: July 16, 1985

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yoshida; Makoto	Ibaraki			JPX
Hirakawa; Tadashi	Kusatsu			JPX

US-CL-CURRENT: 162/157.3; 162/146, 264/143, 264/211, 428/400,  
428/401, 428/903

## ABSTRACT:

Synthetic polyester pulps are provided which are comprised of substantially fibrous fibrils made of a linear aromatic polyester, said fibrils (i) having branches at least in part thereof, (ii) being of an oriented crystalline structure, (iii) having cross-sectional shapes that have irregular and unusual contours, and (iv) exhibiting a freeness of from 50 to 700 cc. The fibrils preferably possess an average fiber diameter of smaller than about 10 microns and a fiber diameter variance of not larger than about 0.7. The pulps are prepared by a process, which comprises the steps of: forming a shaped article from a mixture of a linear aromatic polyester and an organic compound which is incompatible with said polyester and soluble in an alkaline solution; treating the shaped article with an alkaline solution so that the polyester ingredient in the shaped article be at least partially hydrolyzed and the organic compound be at least partially dissolved in the alkaline solution; and then, beating the alkaline solution-treated shaped article.

17 Claims, 9 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 6

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	IMC	Drawing Desc	Image
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☐ 2. Document ID: US 4496583 A

L1: Entry 2 of 5

File: USPT

Jan 29, 1985

US-PAT-NO: 4496583


DOCUMENT-IDENTIFIER: US 4496583 A

TITLE: Paper-like polyester fiber sheet and process for producing the same

DATE-ISSUED: January 29, 1985

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yamamoto; Tamio	Matsuyama			JPX
Kobayashi; Tsukasa	Matsuyama			JPX
Hirakawa; Tadashi	Kusatsu			JPX
Yoshida; Makoto	Ibaraki			JPX
Okumura; Masumi	Joyo			JPX

US-CL-CURRENT: 442/414; 162/157.3, 428/26, 428/904.4, 442/415

## ABSTRACT:

A paper-like polyester sheet having an enhanced filtering property, an excellent mechanical strength and satisfactory touch and appearance, comprises polyester staple fibers and has a coefficient of air flow resistance of 1,000 to 50,000 dyn.s/cm.sup.4 at a volume fraction of the fibers of from 0.01 to 0.24.

21 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	FWC	Draw Desc	Image
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☐ 3. Document ID: US 4049491 A

L1: Entry 3 of 5

File: USPT

Sep 20, 1977

US-PAT-NO: 4049491

DOCUMENT-IDENTIFIER: US 4049491 A

TITLE: Viscous dispersion for forming wet-laid, non-woven fabrics

DATE-ISSUED: September 20, 1977

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Brandon; Ralph E.	Monroe	NY		
Davis; Charles J.	Goshen	NY		
Ring; Michael	Warwick	NY		
Swenson; Roy S.	Central Valley	NY		

US-CL-CURRENT: 162/101; 137/4, 162/157.3, 162/168.3, 162/168.7, 162/189, 162/190

ABSTRACT:

An improved process for forming a non-woven fabric by wet-laying, on paper making equipment, staple length, synthetic fibers having a length to diameter ratio of about 400 to 3000, and an improved, non-woven fabric produced by the process. The process involves forming a stable, viscous, uniform, air-fiber-water dispersion by: adding the fibers to a high-shear agitated mixture of water and a dispersant to separate the fibers and to completely and uniformly distribute the individual fibers throughout the resulting, high-shear agitated, air, water and fiber mixture; and then, slowly adding a thixotropic thickener to the high-shear agitated mixture to form the viscous, air-fiber-water dispersion, having a nascent viscosity of about 10 to 125 cps., when measured at a shear rate of 30.5 sec..<sup>sup</sup>.-1, and in which the individual fibers are restrained from becoming entangled and from forming knits, bundles, and strings.

4 Claims, 4 Drawing figures  
Exemplary Claim Number: 1  
Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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FWMC	Draw Desc	Image
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☐ 4. Document ID: US 3223581 A

L1: Entry 4 of 5

File: USPT

Dec 14, 1965

US-PAT-NO: 3223581

DOCUMENT-IDENTIFIER: US 3223581 A

TITLE: TEXT NOT AVAILABLE

DATE-ISSUED: December 14, 1965

US-CL-CURRENT: 162/157.3; 162/146, 162/157.5, 174/124R, 264/184, 428/397

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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FWMC	Draw Desc	Image
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☐ 5. Document ID: US 2496665 A

L1: Entry 5 of 5

File: USPT

Feb 7, 1950

US-PAT-NO: 2496665

DOCUMENT-IDENTIFIER: US 2496665 A

TITLE: TEXT NOT AVAILABLE

DATE-ISSUED: February 7, 1950

US-CL-CURRENT: 428/203; 162/157.3, 162/157.7, 428/211

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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FWC	Draw Desc	Image
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L3: Entry 1 of 12

File: USPT

Aug 14, 2001

US-PAT-NO: 6274043

DOCUMENT-IDENTIFIER: US 6274043 B1

TITLE: Porous polytetrafluoroethylene membrane

DATE-ISSUED: August 14, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Newman; David	Huntington Station	NY		
Morizio; Franco	Mineola	NY		
Kidd; Stanley	Westbury	NY		

US-CL-CURRENT: 210/500.36; 210/500.27, 428/316.6

## ABSTRACT:

The present invention relates to microporous and ultrafine polytetrafluoroethylene (PTFE) membranes of high permeability, excellent mechanical strength, and good chemical inertness, and to methods for their preparation. According to the method of the present invention, a porous PTFE substrate having a first pore rating is compressed to provide a porous membrane having a second pore rating, wherein the second pore rating is smaller than the first pore rating. The PTFE substrate can be contacted with one or more fibrous sheets during the compression step, which is preferably performed by passing the substrate, and fibrous sheets, if appropriate, between two calender rolls. The resulting porous PTFE membrane then can optionally be stretched and/or sintered, and preferably has a water permeability of at least about 0.5 l/hr/m.sup.2 /kPa.

15 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	FIGS	Draw Desc	Image
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☐ 2. Document ID: US 6260709 B1

L3: Entry 2 of 12

File: USPT

Jul 17, 2001

US-PAT-NO: 6260709

DOCUMENT-IDENTIFIER: US 6260709 B1

TITLE: Membrane filter element for chemical-mechanical polishing slurries

DATE-ISSUED: July 17, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Leman; Derek A.	Indianapolis	IN		
Fritzsche; Alfred K.	Carmel	IN		

US-CL-CURRENT: 209/305; 209/273, 209/300, 210/487, 210/493.1

## ABSTRACT:

A filter media for physically separating particles of an abrasive media having a given mean average particle size from a chemical-mechanical polishing (CMP) slurry. The abrasive media has a particle size distribution including particles larger than the mean average particle size. The filter media is provided as being formed of at least one sheet of a porous membrane having a first and second surface defining a thickness dimension of the membrane therebetween, and having a plurality of generally cylindrical capillary pores formed through the thickness dimension sized effective to capture the particles larger than the mean average particle size. In service, the slurry is supplied to the first side of the filter media, and is passed through the media to the second side thereof such that at least a portion of the particles of the abrasive media larger than the mean average particle size is retained on the first side of the filter media. Such portion may include particles of the abrasive media which are smaller than the pore size of the membrane.

13 Claims, 5 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	FWC	Draw Desc	Image
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☐ 3. Document ID: US 6171443 B1

L3: Entry 3 of 12

File: USPT

Jan 9, 2001

US-PAT-NO: 6171443

DOCUMENT-IDENTIFIER: US 6171443 B1

TITLE: Recyclable polymeric synthetic paper and method for its manufacture

DATE-ISSUED: January 9, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Goettmann; James A.	North East	PA		
Angelini; Peter J.	Central Valley	NY		
Monroe; Stephen H.	Germantown	TN		
Boylan; John R.	Newtown	PA		

US-CL-CURRENT: 162/135; 162/146, 162/157.5

ABSTRACT:

A high-opacity cellulose-free synthetic paper is formed from a wet-laid nonwoven web of thermoplastic fibers, all or most of which fibers are made of a predetermined polymeric material. The wet-laid web is dried to remove excess water, drying being carried out at temperatures below the melting temperature of the predetermined polymeric material. The dried nonwoven web is saturated on at least one side with a pigmented binder forming a continuous coating thereon. The binder is cured at temperatures below the melting temperature of the predetermined polymeric material.

18 Claims, 2 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	RWMC	Draw Desc	Image
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☐ 4. Document ID: US 6156680 A

L3: Entry 4 of 12

File: USPT

Dec 5, 2000

US-PAT-NO: 6156680

DOCUMENT-IDENTIFIER: US 6156680 A

TITLE: Reverse osmosis support substrate and method for its manufacture

DATE-ISSUED: December 5, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Goettmann; James A.	North East	PA		

US-CL-CURRENT: 442/344; 442/351, 442/361, 442/364

ABSTRACT:

A nonwoven composite web is formed by a wet process on a

papermaking machine. The web coming off the papermaking machine is dried and thermally bonded using heated calendar rolls. The nonwoven composite material is made from a furnish of polymeric staple fibers, a first binder fiber consisting, at least in part, of a first thermoplastic binder material which melts at a first melting temperature less than and a second binder fiber consisting, at least in part, of a second polymeric material which has second melting temperature which is higher than the first melting temperature. The first polymeric material is selected to have a first melting temperature less than the temperature to which the first material will be subjected in the papermaking machine. The melted first polymeric material gives the web strength on the papermaking machine. The second polymeric material is selected to have a second melting temperature less than the temperature to which the second material will be subjected in the calendar rolls. Thus, the second polymeric material is melted as the web passes through the calendar rolls and thermally bonds the other fibers of the web when the melted second polymeric material fuses upon cooling. The staple fibers are made of polyester and the bicomponent binder fibers are of the co-polyester/polyester sheath/core variety. The support substrate has a sheet porosity in the range of 5-10 cfm.

11 Claims, 4 Drawing figures  
Exemplary Claim Number: 1  
Number of Drawing Sheets: 3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMCM	Draw Desc	Image
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☐ 5. Document ID: US 6103172 A

L3: Entry 5 of 12

File: USPT

Aug 15, 2000

US-PAT-NO: 6103172

DOCUMENT-IDENTIFIER: US 6103172 A

TITLE: Method of preparaing a porous polytetrafluoroethylene membrane

DATE-ISSUED: August 15, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Newman; David	Huntington Station	NY		
Morizio; Franco	Mineola	NY		
Kidd; Stanley	Westbury	NY		

US-CL-CURRENT: 264/288.8; 210/500.36, 264/127, 264/290.2, 264/291, 264/294, 425/365, 428/304.4, 428/315.5

ABSTRACT:

The present invention relates to microporous and ultrafine



polytetrafluoroethylene (PTFE) membranes of high permeability, excellent mechanical strength, and good chemical inertness, and to methods for their preparation. According to the method of the present invention, a porous PTFE substrate having a first pore rating is compressed to provide a porous membrane having a second pore rating, wherein the second pore rating is smaller than the first pore rating. The PTFE substrate can be contacted with one or more fibrous sheets during the compression step, which is preferably performed by passing the substrate, and fibrous sheets, if appropriate, between two calender rolls. The resulting porous PTFE membrane then can optionally be stretched and/or sintered, and preferably has a water permeability of at least about 0.5 l/hr/m.sup.2 /kPa.

24 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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Wt/C	Draw Desc	Image
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☐ 6. Document ID: US 6087551 A

L3: Entry 6 of 12

File: USPT

Jul 11, 2000

US-PAT-NO: 6087551

DOCUMENT-IDENTIFIER: US 6087551 A

TITLE: Multi-denier non-woven fabric for disposable absorbent products

DATE-ISSUED: July 11, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP	CODE	COUNTRY
Pereira; Jose Antonio	Sao Jose dos Campos				BRX

US-CL-CURRENT: 604/367; 604/358, 604/365, 604/385.01

ABSTRACT:

A multi-denier non-woven fabric suitable for use as a body side liner in disposable absorbent products such as diapers, sanitary napkins, underpads, surgical dressings, tampons, and the like. The multi-denier non-woven fabric is made from an interconnected network thermoplastic polymer fiber elements comprising a homogeneous blend of high denier and low denier fibers having a denier in a range of from 2 to 15 denier, wherein the high denier fiber elements and the low denier fiber elements differ by at least one denier.

18 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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R/MC	Draw Desc	Image
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☐ 7. Document ID: US 6015499 A

L3: Entry 7 of 12

File: USPT

Jan 18, 2000

US-PAT-NO: 6015499

DOCUMENT-IDENTIFIER: US 6015499 A

TITLE: Membrane-like filter element for chemical mechanical polishing slurries

DATE-ISSUED: January 18, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hayden; Daniel B.	Thorntown	IN		

US-CL-CURRENT: 210/767; 210/493.1, 210/499, 451/446, 451/60

## ABSTRACT:

A filter media for physically separating agglomerations of abrasive particles from a chemical-mechanical polishing (CMP) process slurry stream. The media is provided as being formed of at least one fabric sheet having a first and second surface defining a first thickness dimension of the sheet therebetween, with the fabric being woven of polymeric monofilament fibers. In service, the slurry stream is supplied to the first side of the filter media, and is passed through the media to the second side thereof such that at least a substantial portion of the agglomerations of abrasive particles are retained on the first side of the media.

15 Claims, 6 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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R/MC	Draw Desc	Image
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☐ 8. Document ID: US 5989432 A

L3: Entry 8 of 12

File: USPT

Nov 23, 1999

US-PAT-NO: 5989432

DOCUMENT-IDENTIFIER: US 5989432 A

TITLE: Dynamic supported membrane assembly and method of making and using it

DATE-ISSUED: November 23, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gildersleeve; Michael R.	Nesconset	NY		
Alex; Tony	Merrick	NY		
Gsell; Thomas C.	Glen Cove	NY		
Degen; Peter J.	Huntington	NY		

US-CL-CURRENT: 210/650; 210/321.61, 210/321.67, 210/490, 264/45.1,  
96/11

## ABSTRACT:

The present invention provides a supported membrane assembly comprising a membrane adhered to a support material by way of a nonwoven web of multicomponent fibers therebetween, wherein the multicomponent fibers comprise a first polymer and a second polymer such that the second polymer is present on at least a portion of the surface of the multicomponent fibers and has a softening temperature below the softening temperatures of the first polymer, the membrane, and the support material, and the supported membrane assembly has a water flow rate at least about 20% of the water flow rate of the membrane alone. The present invention also provides a filter element comprising a housing and such a supported membrane assembly, as well as a method of preparing such a supported membrane assembly and methods of using such a supported membrane assembly.

49 Claims, 0 Drawing figures  
Exemplary Claim Number: 29,48

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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RMW	Draw Desc	Image
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☐ 9. Document ID: US 5851355 A

L3: Entry 9 of 12

File: USPT

Dec 22, 1998

US-PAT-NO: 5851355

DOCUMENT-IDENTIFIER: US 5851355 A

TITLE: Reverse osmosis support substrate and method for its  
manufacture

DATE-ISSUED: December 22, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Goettmann; James A.	North East	PA		

US-CL-CURRENT: 162/157.3; 162/146, 162/157.5, 162/205, 162/206,  
210/500.21, 264/41

## ABSTRACT:

A nonwoven composite web is formed by a wet process on a papermaking machine. The web coming off the papermaking machine is dried and thermally bonded using heated calendar rolls. The nonwoven composite material is made from a furnish of polymeric staple fibers, a first binder fiber consisting, at least in part, of a first thermoplastic binder material which melts at a first melting temperature less than and a second binder fiber consisting, at least in part, of a second polymeric material which has second melting temperature which is higher than the first melting temperature. The first polymeric material is selected to have a first melting temperature less than the temperature to which the first material will be subjected in the papermaking machine. The melted first polymeric material gives the web strength on the papermaking machine. The second polymeric material is selected to have a second melting temperature less than the temperature to which the second material will be subjected in the calendar rolls. Thus, the second polymeric material is melted as the web passes through the calendar rolls and thermally bonds the other fibers of the web when the melted second polymeric material fuses upon cooling. The staple fibers are made of polyester and the bicomponent binder fibers are of the co-polyester/polyester sheath/core variety. The support substrate has a sheet porosity in the range of 5-10 cfm.

12 Claims, 4 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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RMK	Draw Desc	Image
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☐ 10. Document ID: US 4904520 A

L3: Entry 10 of 12

File: USPT

Feb 27, 1990

US-PAT-NO: 4904520

DOCUMENT-IDENTIFIER: US 4904520 A

TITLE: Gas-permeable, liquid-impermeable nonwoven material

DATE-ISSUED: February 27, 1990

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dumas; David H.	Wilmington	DE		
Echt; Elliott	Wilmington	DE		

US-CL-CURRENT: 428/212; 128/849, 162/146, 162/149, 162/207,  
206/438, 206/439, 206/524.2, 206/524.6, 206/811, 220/DIG.11 ,  
428/315.5, 428/315.9, 442/389

## ABSTRACT:

Disclosed is a liquid-impermeable, gas-permeable nonwoven material comprising a thermally consolidated blend of (1) 5% to 30% of a first polyolefin pulp, (2) 15% to 90% of a second polyolefin pulp having a melting point at least 20.degree. C. higher than the first polyolefin pulp, and (3) 5% to 55% of a staple fiber. Also disclosed is a wet forming method for making such a nonwoven material without the use of surfactants.

24 Claims, 0 Drawing figures  
Exemplary Claim Number: 1,19

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KindC	Draw Desc	Image
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☐ 11. Document ID: US 4795559 A

L3: Entry 11 of 12

File: USPT

Jan 3, 1989

US-PAT-NO: 4795559

DOCUMENT-IDENTIFIER: US 4795559 A

TITLE: Semipermeable membrane support

DATE-ISSUED: January 3, 1989

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Shinjou; Ietsugu	Shiga			JPX
Shoji; Rikuo	Moriyama			JPX

US-CL-CURRENT: 210/490; 210/500.27

## ABSTRACT:

Disclosed is a semipermeable membrane support and a process for making the same. The support is formed of a non-woven fabric of a laminated structure having a low density layer with an air permeability of 5 to 50 cc/cm.sup.2 /sec and a high density layer with an air permeability of 0.1 cc/cm.sup.2 to 5 cc/cm.sup.2 /sec, the non-woven fabric having an overall air permeability of 0.1 to 4.5 cc/cm.sup.2 /sec. The process for preparing such a support consists of laminating a dry processed web, which is entirely of polyester fibers containing 20 to 80% of undrawn polyester fiber or conjugate polyester fibers having an average fiber denier of 1 to 3 denier formed through a dry process, and an un-press-treated wet processed web, which is entirely of polyester fibers containing 30 to 90% of undrawn polyester fibers or conjugate polyester fibers having a fiber denier of 0.1 to 1.5 denier formed through a paper making process and subsequent drying process with hot air to self-bond lightly, pressing the laminated dry processed web and wet processed web with a heated calendar at a sufficient temperature for bonding firmly the laminated webs.

13 Claims, 0 Drawing figures  
Exemplary Claim Number: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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FWMC	Draw Desc	Image
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☒ 12. Document ID: US 4728394 A

L3: Entry 12 of 12

File: USPT

Mar 1, 1988

US-PAT-NO: 4728394

DOCUMENT-IDENTIFIER: US 4728394 A

TITLE: Semipermeable membrane support and process for preparation thereof

DATE-ISSUED: March 1, 1988

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Shinjou; Ietsugu	Shiga			JPX
Shoji; Rikuo	Moriyama			JPX

US-CL-CURRENT: 162/129; 162/130, 162/132, 162/146, 162/201,  
162/206, 162/207

ABSTRACT:

Disclosed is a semipermeable membrane support and a process for making the same. The support is formed of a non-woven fabric of a laminated structure having a low density layer with an air permeability of 5 to 50 cc/cm.sup.2 /sec and a high density layer with an air permeability of 0.1 cc/cm.sup.2 /sec to 5 cc/cm.sup.2 /sec, the non-woven fabric having an overall air permeability of 0.1 to 4.5 cc/cm.sup.2 /sec. The process for preparing such a support consists of laminating a dry processes web, which comprises entirely polyester fibers containing 20 to 80% of undrawn polyester fiber or conjugate polyester fibers having an average fiber denier of 1 to 3 denier formed through a dry process, and an un-press-treated wet processed web, which comprises entirely polyester fibers containing 30 to 90% of undrawn polyester fibers or conjugate polyester fibers having fiber denier of 0.1 to 1.5 denier formed through a paper making process and subsequent drying process with hot air to self-bond lightly, pressing said laminated dry processed web and wet processed web with a heated calendar at a sufficient temperature for bonding firmly the laminated webs.

5 Claims, 0 Drawing figures  
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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